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### *National experiences and policy initiatives*

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# Eating at worksites in Nordic countries: national experiences and policy initiatives

Worksites  
in Nordic  
countries

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## Abstract

**Purpose** – The purpose of this paper is to review national experiences and policy initiatives within worksite eating in four Nordic countries, in order to compare the experiences and identify important lessons and needs for future research, experiments and governmental regulation.

**Design/methodology/approach** – The paper is based on national reviews of analyses of worksite eating and initiatives regarding policy, research and experiments in relation to worksite eating. The national experiences are compared.

**Findings** – The paper shows awareness in all four countries about the role of the worksite in the shaping of dietary habits of the employees and some experiments with healthier worksite eating schemes. Blue-collar employees, employees with working hours outside normal working hours and employees with shifting worksites are likely to be offered less organised and less healthy food schemes. Worksites' experiments with healthier worksite eating schemes based on employee participation can change worksite eating substantially, including at blue-collar worksites. However, the generalising of findings to other worksites not participating in the experiments seems limited. There is need for more research in the embedding of experiments.

**Originality/value** – The paper has value as the first cross-national review covering four of the Nordic countries in the area of worksite eating and attempts to create healthier worksite eating. By combining research findings and policy initiatives from four countries, the paper gives access to a big pool of knowledge, which can inspire future research and policy initiatives, including future experiments and future governmental regulation.

**Keywords** Diet, Workplace, Denmark, Finland, Norway, Sweden

**Paper type** General review



## 1. Introduction

A large number of citizens in the Nordic countries do not eat in accordance with the official recommendations regarding fat (especially saturated fat) and sugar. Only few meet the recommended intake levels of fruits and vegetables and many have a low intake of fish and whole-grain cereals (Nordic Council of Ministers, 2006). As a result, the prevalence of obesity and other lifestyle-related disorders are growing. Where this has traditionally been considered as a private matter and the responsibility of the individual, there is a growing awareness and increasing interest in taking collective action. And where eating, traditionally, has been considered as an everyday life mundane activity, it has now moved forward to be a corporate matter and a public health policy issue. Companies increasingly engage in initiatives aimed at promoting healthy lifestyle in order to protect the health of their employees, and studies on worksite health promotion interventions have shown a positive return of investments (Trogon *et al.*, 2009; Mills *et al.*, 2007). This interest seems to be driven by the possible association between eating and work performance.

A considerable part of the adult population take one or more of their daily meals at the worksite and the workplace seems to have the potential for being a promising setting for health promotion, as suggested by the WHO in the Ottawa charter from 1986. There is a growing interest from companies in staging the eating environment at worksites as an occasion for enjoyment and experience. As a result, the responsibility for food, nutrition and health seems to shift from being a private responsibility to being a responsibility shared between the individual and the company.

Meanwhile, the interest in the subject of eating at the worksite has grown – from both researchers and policy makers. Against this background, this paper seeks to give an overview of healthier eating at work initiatives in the Nordic countries over the past decades.

### 1.1 Purpose

The purpose of this paper is to review the analyses of worksite eating and attempt to improve it in a more healthy direction in four Nordic countries – Denmark, Finland, Norway and Sweden – over the past decades. The paper aims at reviewing initiatives regarding policy, practices and research and innovation. The national contributions cover:

- knowledge about the relations between work, diet in general and worksite eating;
- the experiences with promotion of healthier eating through intervention projects at worksites; and
- national legislation of importance to work, diet and worksite eating.

### 1.2 Methods

Literature on research, practice and policies on the topic of eating at worksites in the Nordic countries has been reviewed. The main part of the literature from Denmark and Sweden was identified in the Øresund Food Network project on “food at work” and has been published in the knowledge survey “Mat på arbetet” (Jørgensen *et al.*, 2009). A literature search was performed regarding the scientific literature. Other types of literature were identified through a modified snowball sampling technique (Patton, 1990). In the snowball sampling technique, knowledgeable study subjects are contacted

and these in turn recruit future subjects from among their network. Through this technique, the subjects identified evidence on projects, grey literature and policy initiatives that could be reviewed. Further studies were identified at the Nordbalt seminar. The contributions from Finland cover the same issues as the Danish and Swedish analyses, while the Norwegian review has a more limited focus, with the main focus on local initiatives and policy initiatives.

## 2. Work and worksite eating in Denmark

There is not much Danish research about the influence of the work and the work environment on the employees' eating habits, nor on worksite eating. The few available analyses show that negative and long-term stress, where the employee's lack of influence and control of own work may cause health problems and changes in body weight, so that slim persons become slimmer and obese persons become more obese (Overgaard *et al.*, 2004, 2006; Hannerz *et al.*, 2004).

The organization of work influences how the worksite eating is organized. Especially in the service sector, it is difficult for the employees to eat at the same time. The eating schedule seems to be negotiated among the employees according to the needs of the individual employee (Kristensen, 2003).

A national diet survey from 1997 showed social inequalities in relation to health. Persons with long education eat healthier and are more interested in healthy food (Groth and Fagt, 2001). There is also a correlation between diet and other aspects of life style: if a person has healthy dietary habits it is more likely that the person also has a high level of physical activity, does not smoke and does not have a high consumption of alcohol (Groth and Fagt, 2003). These aspects may also have some connection to the type of work and working conditions.

Big worksites are more likely to have a canteen than small worksites. A survey indicates that worksites with more than 50 employees more often have a canteen. The canteens are typically small. Around 75 per cent of the canteens have less than five employees; 25 per cent of the canteens are outsourced, while 75 per cent are run by the worksite. A recent survey shows that more and more canteens sell food from a buffet and not from desk. The survey also showed that the self-reported assortment in the canteens, in general, does not live up to the national dietary recommendations. Only around one-fourth of the canteens have a nutrition policy, which seems to correspond to the weak role of healthier food in Danish canteens (Thorsen *et al.*, 2009). Another study of worksite canteens found no association between the meal serving system and energy intake or macronutrient composition. However, eating at canteens serving buffet style was associated with an increased intake of fruit and vegetables and a lower energy density of the food for both genders (Lassen *et al.*, 2007a).

An increasing number of Danish worksites have some kind of health promotion activities, including some kind of healthier food, providing free water, healthier meal options, bread with high-fibre content, fruit supply scheme, etc. A national survey of these activities is carried out biannually. The recent survey shows that 60 per cent of the worksites have some kind of food supply for the employees. For example, 33 per cent of the worksites have a food scheme such as a canteen and 48 per cent have a fruit scheme. The surveys show big inequalities in regard to health promotion at the worksites with respect to branch and geographic region. Within the financial sector, 53 per cent of the worksites have a food supply scheme, while only 30 per cent within

the construction sector has some kind of food supply to the employees (Danish National Board of Health, 2008).

A substantial part of the Danish experiences within worksite eating are based on experience with worksite intervention projects aiming at making the food supply healthier at a small number of test worksites; among these are the 6-a-Day project (600 gram of fruit and vegetables a day) (Lassen *et al.*, 2003) and the food-at-work project (Lassen *et al.*, 2007a). The interventions in these studies have achieved bigger awareness about healthy food and also an average increase in the consumption of fruit and vegetables. The differentiation among the individual employees' consumption is not known. A recent initiative is focusing on developing options for the employees at the worksite to buy food for dinner at home – so-called canteen-take-away (Lassen *et al.*, 2003; Lassen *et al.*, 2009). The aim is to reduce the stress on the employees. Some schemes aim at providing healthy dinners.

The long-term embedding of the intervention activities has, up until now, only been analysed to a limited extent. The analyses show that employee participation in the planning and implementation of the scheme and a scheme based on voluntary initiatives seems to make employees assess the scheme as a positive initiative. The organizational and economic conditions of the worksite seem to influence the long-term embedding of healthier eating initiatives. For example, many new employees may challenge the healthier eating, and outsourcing of the canteen may make it difficult to sustain results obtained before the outsourcing unless it is made part of the tender criteria (Lassen *et al.*, 2007b, 2009; Thorsen *et al.*, 2007).

The governmental initiatives around healthier worksite eating have, up until now, focused on developing policy documents, printed materials for inspiration, guidelines, training and funding of intervention projects. Most governmental initiatives have involved a number of different stakeholders in a kind of partnership relations. The stakeholders include governmental authorities and agencies, research institutes, health organizations, business organizations and trade unions. A recent initiative focuses on food and diet policies at worksites. All governmental worksites at the state level should, before the end of 2008, develop a food and diet policy. The experiences so far from other areas, like public green procurement, indicate that a policy in itself may not change the practice of an organization (Jørgensen *et al.*, 2009).

### 3. Worksite and eating in Finland

There is a long tradition of having a hot meal during the workday in Finland (Prättälä, 2000). Finnish worksite canteens were developed especially in the 1970s. The Finnish Institute of Occupational Health gave recommendations for eating arrangements at work in 1971. Meal provision at work was included in trade union agreements in both the public and private sectors. The economic support given to workplace meals has diminished from the peak years of the 1980s but they are still supported by different tax agreements and subsidies (Raulio *et al.*, 2010).

Despite a long tradition of workplace canteens, there is limited research focusing on relations between the work, diet in general and worksite eating in Finland and most of the results are published in scientific literature within last ten years. The proportion of people eating at worksite canteens in Finland has been monitored during the recent years. The use of catering services is common in Finland. On average, 54 per cent of Finnish employed men and 61 per cent of employed women have a possibility to use

worksite canteen and of all employees, 30 per cent eat at a worksite canteen daily, whereas 30 per cent of men and 45 per cent of women eat packed lunches (Raulio *et al.*, 2010). The tradition of having a warm lunch at a worksite canteen has persisted in Finland despite major changes in working and living conditions and social structures during the past two decades (Raulio *et al.*, 2005). Eating lunch at a worksite canteen is largely determined by employee's education level and geographic region. Those with more years of education and living in the Helsinki capital and working at large workplaces eat more often at the worksite canteen than the others. Contrary to this, those with the lowest education level and living somewhere else than in the capital area, prefer packed meals (Raulio *et al.*, 2004, 2007). Cross-sectional population surveys suggest that the use of catering services is associated with more healthy food habits, those eating at worksite canteen generally eat more fresh vegetables and fish compared to other employees (Roos *et al.*, 2003; Lallukka *et al.*, 2001; Raulio *et al.*, 2009). Among men, energy, vitamin A and carotenoid intake from canteen lunches were higher than from packed lunches. Among women, the canteen users got more energy and fat, but fewer carbohydrates and less sugar and fibre. The nutritional differences in the meals eaten at worksite canteens compared to packed lunches were quite modest, but there is quite strong evidence that eating at canteens increases the vegetable intake (Raulio *et al.*, 2009).

Employees in large workplaces are more likely to eat at worksite canteens. The size of the working place and gender are moderators for the association between other working conditions and eating at worksite canteen. At small workplaces, physically demanding jobs held by female employees and low-job control encouraged employees to use the canteen. On the other hand, at large workplaces, low social support at work encouraged the use of canteens among men whereas high-mental strain at work was associated with employees using the canteen less (Raulio *et al.*, 2007). Working conditions have also been associated with employees' food habits. Employees reporting that working life interferes with family life are less likely to report recommended food habits compared to other employees (Roos *et al.*, 2007). Among women, mentally strenuous work and high-job control were associated with recommended food habits (Lallukka *et al.*, 2004). As a summary, it can be said that working conditions have some influence on food habits and canteen use among Finnish employees, but studies are few and have been carried out with selected populations. Some working conditions possibly constitute barriers for healthy food habits, but the picture is not so clear and varies depending on the size of the workplace.

Interventions focusing on improving food habits have been carried out at Finnish worksites, but the results from the interventions have not, to our knowledge, been published in international scientific journals. An example of interventions currently carried out, or ongoing, is interventions focusing on improving food habits and diets among construction workers and drivers (Ministry of Social Affairs and Health, 2009). An example of a more general effort to improve healthier lunches among employees is the heart symbol of the Finnish Heart Association. The symbol helps customers to make tasty and healthy choices when eating outside home. It also helps caterers to inform customers of healthy choices on offer (Lahti-Koski *et al.*, 2008).

Development and monitoring of catering services, including meals served at worksite canteens, is currently on the political agenda in Finland. The Finnish Government included the development of catering services into its four-year policy



programme for health promotion launched in 2007 (Ministry of Social Affairs and Health, 2007). As part of this programme, a specific working group on catering services was nominated by the Finnish Ministry of Social Affairs and Health. The goal of the working group is to improve the availability, nutritional quality and monitoring of catering services. The working group has recently published a report with advice on how to develop mass catering (Ministry of Social Affairs and Health, 2009). One conclusion of the report was that the use of mass catering in different population groups and the nutrient quality of the food served has to be monitored, to support health and nutrition policy decision making in health promotion. It was also concluded that mass catering has a central part in the Finnish food culture and it is important for the health, working vitality and wellbeing of the Finnish population.

#### **4. Work and worksite eating in Norway**

The intake of fruits and vegetables in Norway is less than half the recommended amount – just over 300 gram per person per day. At the same time, there is an increasing tendency of overweight and obesity in all age groups (Norwegian Institute of Public Health, 2009).

Jobbfrukt (Jobfruit) is the result of collaboration between a private company and a nationwide network of companies employing people with various physical or mental disabilities. Jobbfrukt.no distributes fruit baskets to both private and public worksites all over Norway all year round on a subscription basis (Arsky, 2009).

Another example is Pluss Bedrift (Plus Workplace), which is an internal company but also comprises healthy food choices at the sports arenas around Norway. The concept consists of coolers and salad bars strategically placed in office canteens and offices. The salad bars ensure healthy lunch options while the cooler offers healthy snacks, smoothies, overtime meals and ready-to-heat dishes to bring home after work at low cost. Pluss Bedrift also includes offering easy-to-do physical activities to the employees, such as morning walks followed by communal breakfast, short jogging trips and weekend trips with a focus on physical activity (Arsky, 2009).

For both target areas the aim is to increase the intake of fruits and vegetables at work and create new and healthier habits which will affect the employees' food choices outside work as well. Readily available fruits and vegetables make it easier for the employees to fulfil the recommendation of eating five portions of fruits and vegetables per day. The fruit and vegetables also increase wellbeing, and findings suggest that worksites offering fruits and vegetables register fewer sick leaves among the employees.

The Norwegian Army caters for conscripts as well as military and civilian employees. The army is a large employer serving many millions of meals each year. The Green Wave was launched in 2003 aiming to triple the intake of fruits and vegetables before 2007. The work has included development of a new meal concept and new recipes with more fruits and vegetables, more wholegrain bread, and leaner meat and dairy products. Increasing the competence level in the organisation by an information campaign has also been part of the concept.

Diet and canteen services have been a part of the competence development programmes led by the county governors in two counties. The aim was to increase the participants' knowledge about health-promoting work and methods in order to implement this in the respective workplaces. Over 45,000 employees in 27 different workplaces have participated. Half of the participants think that the employers have

a shared responsibility for the employees' diet and should lead a healthy policy in that area. Close to 70 per cent say that the nutritional focus at work has had a positive impact on the worksite environment, the wellbeing of the employees, and means a greater knowledge about diet and nutrition. The participants wish to prolong and further develop the programme.

The work site is seen as an important arena for public health policy in a report from the Norwegian Government from 2002 to 2003 (Ministry of Health and Care Services, 2003). This report was followed by a recent nutrition action plan for a healthier diet (Ministry of Health and Care Services, 2007). The Norwegian Government has previously developed normative recommendations for food and drink offered in canteens and other food-serving facilities (Public Health Agency, 2005). One major goal is to have employers integrate nutritional considerations into their staff policy. Since worksites in Norway vary from single-person businesses to large companies with thousands of workers, the strategies must be specific in order to be relevant. Communal meals play an important role in bonding, in creating a good and positive atmosphere at work, and in reducing sick leave.

In the governmental report for public health policy (Ministry of Health and Care Services, 2003), the different Norwegian Ministries are given five different areas of responsibility towards taking action for a healthier work force:

- (1) Establish a dialogue between the different parties in public and private work places and the health authorities in order to promote healthy dietary habits (responsible: Ministry of Health and Care Services).
- (2) Assess how dietary considerations can be looked after at the worksites (responsible: Ministry of Health and Care Services, Ministry of Labour).
- (3) Strengthen the competence and access to tools regarding diet and health towards canteen employees, union representatives, management and the worksite health teams (responsible: Ministry of Health and Care Services, Ministry of Agriculture and Food, Ministry of Fisheries and Coastal Affairs).
- (4) Motivate rehabilitation worksites to include diet and physical activity regarding adjustments in the labour force (responsible: Ministry of Labour, Ministry of Health and Care Services).
- (5) Develop and test low-threshold programmes regarding diet for persons on long-term sick leaves and others left outside the regular work force (responsible: Ministry of Health and Care Services).

## 5. Food and meals at work in Sweden – knowledge and experiences

Most research conducted in Sweden concerning food at work has been carried out from nutritional, medical and socio-economic perspectives, often in relation to industrial shift work. Studies conducted during the 1960s and 1970s often focused on the heavy industrial sector and were often extensive and included living conditions and health conditions in general, as well as nutritional aspects. Later, medical studies have often focused on the influence of shift work on health, energy metabolism and obesity (Karlsson, 2004; Knutsson and Bøggild, 2000; Knutsson, 2003). Research has also been carried out with the focus on the importance of the circadian rhythm on our eating habits and the relations between food, nutrition and sleep, as well as how it affects the human body (Lennernäs, 1993; Lennernäs *et al.*, 1994; Lowden *et al.*, 2004, 2010).



Later research in Sweden has also highlighted the value of social and cultural aspects of what, how, when, why and with whom we eat, yet often from another perspective than work (Fjellström, 2003). However, the project “Väggkrogen” (the roadside restaurant) was carried out in the middle of 1990s with the aim of increasing the ability for lorry drivers to eat healthily at work. The study included the supply of food at restaurants along the road, as well as the working conditions, time schedules and the need for social contacts all being important in the drivers’ decisions of what to eat at work (Wirfält, 1997). The study highlighted many aspects important to include in order to understand, as well as to improve, healthy eating at work, especially among occupational groups with irregular working hours and a mobile working place.

In 2004, a multi-disciplinary study was conducted with a focus on food habits and food culture among bus drivers and assistant nurses, both working irregular working hours (Lindén *et al.*, 2005). The research group, represented by researchers from medical as well as sociological, ethnological, pedagogical and economical disciplines, aimed at increasing the knowledge of eating habits at work and the relation between what we eat and social, cultural and economic factors at the workplaces. The study also highlighted important aspects concerning ethnicity, generation and gender in relation to attitudes to food and meals at work (Lindén and Nyberg, 2009). This area was further investigated in a project, where the conditions for having meals at work were explored (Nyberg, 2009). The research recognized the importance of the time, place and social relations in order to have meals at work and not just something to eat. The study also demonstrated that the meal is often rationalized away in working life today, and that there is a great need of a wider perspective of the concept of healthy meals at work, as well as a clearer focus on which working situations facilitate, as well as hinder, the possibility of having healthy meals at work.

Healthy eating at work is officially recognised an issue for work management and food supply workers in facilitating this process (Livsmedelsverket, 2007). Important aspects are: what food is served and at what time? How long are the breaks? How are the physical meal locations designed? and are the meals surrounded by social relations? The use of “key meal” is an example of an informative policy instrument (Bohman and Laser Reuterswärd, 2006) as well as the former label “God mat för oss på väg” (Good food for us on the road) on roadside restaurants offering healthy food choices (Wirfält, 1997).

Combinations of policy instruments have shown advantages compared to single instruments. As an example, the project “Livsstil i Väst” (lifestyle in the west), a collaboration between Volvo and Västra Götalandsregionen in the west coast of Sweden, has since 2005 been working with improving health from multiple perspectives among their employees. One of the focus areas has been food and diet, and they have implemented health campaigns in canteens, changed the menu to include more healthy choices, and started cooking classes, to mention a few examples. Their goals have been to offer all employees a meal for 40 SEK (approximately €4), meal breaks lasting 40 minutes and that 80 per cent of the employees should use the staff restaurant (Livsstil i väst, n.d.).

## 6. Discussion and conclusion

The four national descriptions of worksite eating show both similarities and differences in the type of knowledge and experiences. The experience from all four

countries shows awareness around the role of the worksite in the shaping of eating habits and experience with development of healthier worksite eating schemes. The research about worksite eating and its shaping through social and economic conditions seems more extensive in Denmark, Finland and Sweden.

An area which does not seem to have been researched as part of the shaping of worksite eating is the role of the national food sector. There are indications from research of the food sector in general that the big-meat sectors in Denmark influence the economic and physical availability of meat and dairy products and thereby the diet of the population (Jørgensen, 1989), but the role in the shaping of worksite eating has not been researched. Also, the role of the big-fishing sector in Norway on worksite eating does not seem to have been researched.

The knowledge about worksite eating from Denmark and Finland both show social inequalities within worksite eating in relation to the sector of the worksite (with more focus on health food in white-collar dominated sectors), the size of the worksite (better facilities at bigger worksites) and the geographic location of the worksite (better facilities in the capital region). This may indicate that the employers' willingness to pay for healthier eating schemes is influenced by demand and supply of different competences at the labour market. Also, the gender composition of the employees seems to have influence on the worksite eating: women eat healthier than men.

The research in Denmark, Finland and Sweden has focused on how working conditions influence the conditions for worksite eating. In Sweden, focus has especially been on the difficulties in work with shifting worksites and irregular working hours. Research from Denmark and Finland shows problems in obtaining a regular lunch break together with colleagues due to the way the work is organised. The research in Denmark shows, furthermore, that stressful working conditions influence weight – and thereby eating habits – as one of the aspects of everyday life which may be influenced by stressful working conditions. In Finland, research shows that there may be negative interference from working conditions on family life, which makes it more difficult to follow recommended dietary guidelines.

The experiments with healthier worksite eating habits all seem to have included development of healthier worksite eating schemes in worksite canteens and not only information about the importance of healthy eating habits. The assessment of the impacts of these types of changes seems limited in all the countries, both in terms of the embedding at worksites involved in experiments and in terms of dissemination of experiences to other worksites. However, the embedding of some experiences at worksites involved in experiments has been and is being researched in Denmark. These assessments of Danish experiences show the importance of employee participation; and awareness about worksite history and norms and values as important in the planning and implementation of healthier worksite eating schemes.

The areas of governmental regulation which influence worksite eating are multiple, since both work environmental regulation, regulation of the food sector in general and regulation of worksite eating, including the pricing and possibilities for experiments, all play a role. The research so far has only focused on the role of regulation of worksite eating, including rules for food prices and employer subsidies to worksite canteens. The experiments with healthier worksite eating so far have been organised by different groups of stakeholders, including private and public worksites and partnerships

between public and private stakeholders involving, among others, worksites, trade unions, trade organisations and ministries and public agencies.

If the knowledge about worksite eating and the social shaping hereof in the four countries is put together, there is a diverse knowledge pool about this area, which shows how this area of everyday life is co-shaped by working conditions, private life conditions and the national food sector. This pool of knowledge could serve as a base for future planning of both national and cross-national research, experiments and regulation. However, there is also need for more analysis of the long-term embedding of experiments and more analysis of the impact of working conditions on dietary habits at the worksite and outside working hours.

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